

REMARKS

Claims 1-3, 5-27, 29-51, 53-75, and 77-104 are currently pending in the Application. Claims 1, 25, 49, and 73 are independent. Claims 8, 32, 56, and 80 have been cancelled. Claims 1, 2, 5, 9-13, 25, 29, 33-37, 49, 53, 57-61, 73-75, 77-79, 81-96, 103, and 104 have been amended. No new matter has been added.

Claims 2, 5, 9-13, 29, 33-37, 53, 57-61, 77, 81-86, 88-91, 93, 94, and 96 have been amended to fix minor typographical errors.

Applicants respectfully request reconsideration and allowance in view of the following remarks and amendments.

Information Disclosure Statement

Please consider the references provided on the included information disclosure statement, and please initial and sign the enclosed PTO-1449 form.

Examiner Interview Summary

Examiner Hanh Nguyen is thanked for the telephone interview held on May 1, 2009 with Mr. Fryckman. The substance of the interview included a discussion of the language of independent claims 1, 25, 49, and 73, dependent claims 12, 36, 60 and 84, and the claim rejections under 35 U.S.C. 101 and 35 U.S.C. 103 as indicated by the Official Action dated December 18, 2008. The Office's 35 U.S.C. 103 rejections include rejections over Ma (Ma et al., US7,233,625) in view of Chuang (US7,099, 413). Agreement was reached as is detailed below.

The Examiner indicated that amending claim 1 to recite "receiving, at a receiver, a preamble across a channel" would overcome the Examiner's rejection to claim 1 under 35 U.S.C. 101 (hereinafter, the "receiver" amendment).

The Examiner, in the January 6, 2009 dated Office action, indicated that dependent claims 12, 36, 60 and 84 contain allowable subject matter. The Examiner indicated that the feature "the preamble comprising a first group of excited subcarriers and a second group of subcarriers being set to zero in a frequency domain" is at least one of the features of claims 12,

36, 60 and 84 that represents allowable subject matter. The Examiner indicated that amending independent claims 1, 25, 49, and 73 with this feature would overcome the Examiner's 35 U.S.C. 103 rejection, using Ma and Chuang, to claims 1, 25, 49, and 73 (hereinafter the "preamble" amendment).

The Examiner indicated that claim 1 would be allowable if it was amended to include both the "receiver" amendment and the "preamble" amendment as set forth above. The Examiner indicated that claims 25 and 49 would be allowable if they were amended to include the "preamble" amendment as set forth above. However, the Examiner indicated that he would have to review any amendments to claim 73 before allowing the claim.

Allowable Subject Matter

The indication of allowable subject matter in claims 3, 5, 6, 12, 13, 15, 16*, 20, 21, 23, 27, 29, 30, 36, 37, 39, 40, 44, 45, 47, 51, 53, 54, 60, 61, 63, 64, 68, 69, 71*, 75, 77, 78, 84, 85, 87, 88, 92, 93, 95 is acknowledged and appreciated. *Claims 16 and 71 were not included in the list of claims with allowable subject matter on page 8 of the January 6, 2009 dated Office action, but were listed as "objected to" claims on page 2.

It is recognized that in accordance with M.P.E.P. § 1302.14, the Examiner's reasons for allowance need not set forth all of the details as to why the claims are allowed. In the above-referenced application, it is not conceded that the Examiner's stated reasons for allowance are the only reasons for which the claims are allowable. The Examiner's reasons for allowance indicate that particular claim elements are not disclosed or suggested by the prior art of record, yet the claims may be patentable for other reasons as well, including the inventive combination of all of the recited claim elements. It is not conceded that the specific limitations identified by the Examiner are necessary to distinguish the art of record or to satisfy the requirements of 35 U.S.C. § 112. Moreover, the Examiner does not assert, and it would not be conceded, that the Examiner's reasons have any bearing on the patentability of claims in any other applications directed to the disclosed subject matter.

In addition, each dependent claim stands on its own and may be allowable on its own merits. In particular, each dependent claim may be allowable on the basis of a combination of some of the features recited in the dependent claim and its base claim(s), which combination of features may not include all of the limitations identified in the Examiner's reasons for allowance.

Claim Objection

The Office objected to claim 2. Claim 2 has been amended to correct a minor typographical error. Thus, withdrawal of the objection to claim 2 is respectfully requested.

Rejection under 35 U.S.C. § 101

Claims 1-3, 5-24, 97, and 98 stand rejected under 35 U.S.C. § 101 for allegedly not being in compliance with 35 U.S.C. § 101. Without conceding the propriety of the rejection, claim 1 has been amended, as discussed above, to expedite prosecution and to obviate the rejection to claims 1-3, 5-24, 97, and 98.

Claim 73-75, 77-96, 103, and 104 stand rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Without conceding the propriety of the rejection, independent claim 73 has been amended and now recites in part “A computer readable medium encoded with a computer program, the computer program indicative of operations comprising” (emphasis added). Applicants respectfully assert that Claim 73, and the claims that depend there from, is directed toward statutory subject matter. Thus, withdrawal of the rejection to claims 73-75, 77-96, 103, and 104 is respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 1, 2, 7, 9, 10, 18, 25, 26, 31, 33, 34, 41, 42, 49, 50, 55, 57, 58, 65, 66, 73, 74, 79, 81, 82, 89, and 90 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ma (Ma et al., US7,233,625) in view of Chuang (US7,099, 413). Claims 19, 22, 24, 43, 46, 48, 67, 70, 72, 91, 94, and 96 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ma et al. (Ma et al. US7,233,625), Chuang (Chuang US7,099, 413), and

Gozzo (Gozzo US5,432,816). Claims 11, 35, 59 and 83 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ma, Chuang, and Kadous (Kadous US6,996,195).

Independent claim 1 has been amended and now recites in part “receiving, at a receiver, a preamble across a channel, the preamble comprising a first group of excited subcarriers and a second group of subcarriers being set to zero in a frequency domain, the preamble including two or more training sequences” (emphasis added). For at least the reasons discussed above, independent claim 1 is allowable over Ma and Chuang.

Independent claim 25 has been amended and now recites in part “a Fourier transform module operable to perform a Fourier transform of two or more training sequences received in a preamble in a frequency domain, wherein the preamble comprises a first group of excited subcarriers and a second group of subcarriers being set to zero in the frequency domain” (emphasis added). For at least the reasons discussed above, independent claim 25 is allowable over Ma and Chuang.

Independent claim 49 has been amended and now recites in part “means for performing a Fourier transform of two or more training sequences received in a preamble, the preamble comprising a first group of excited subcarriers and a second group of subcarriers being set to zero in a frequency domain” (emphasis added). For at least the reasons discussed above, independent claim 49 is allowable over Ma and Chuang.

Independent claim 73 has been amended and now recites in part “performing a Fourier transform of two or more training sequences received in a preamble across a channel, the preamble comprising a first group of excited subcarriers and a second group of subcarriers being set to zero in a frequency domain” (emphasis added). For at least the reasons discussed above, independent claim 73 is allowable over Ma and Chuang.

For at least their dependency on respective independent claims discussed above, dependent claims 2, 7, 9, 10, 18, 26, 31, 33, 34, 41, 42, 50, 55, 57, 58, 65, 66, 74, 79, 81, 82, 89, and 90 are also allowable over the proposed combination of Ma and Chuang. For at least their dependency on respective independent claims discussed above, dependent 19, 22, 24, 43, 46, 48, 67, 70, 72, 91, 94, and 96 are also allowable over the proposed combination of Ma, Chuang, and

Gozzo. For at least their dependency on respective independent claims discussed above, dependent 11, 35, 59, and 83 are also allowable over the proposed combination of Ma, Chuang, and Kadous.

Concluding Remarks

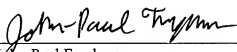
The foregoing comments made with respect to the positions taken by the Examiner are not to be construed as acquiescence with other positions of the Examiner that have not been explicitly contested. Accordingly, the above arguments for patentability of a claim should not be construed as implying that there are not other valid reasons for patentability of that claim or other claims.

In view of the above remarks, claims 1-3, 5-7, 9-27, 29-31, 33-51, 53-55, 57-75, and 77-79, and 81-104 are in a condition for allowance, and a formal notice of allowance is respectfully requested.

Please apply a one month extension of time fee of \$130.00 dollars and any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 5/6/09



John-Paul Fryckman
Reg. No. 62,880

Fish & Richardson P.C.
Customer Number 26200
Telephone: (858) 678-5070
Facsimile: (877) 769-7945